

AMENDMENTS TO THE CLAIMS

These claims replace all prior versions, and listings, of claims in the application:

1.(currently amended): A communication data relay system for relaying between two or more domains each configured by one or more networks, a relay source domain having routing information to a relay destination domain, comprising:

two or more interface modules for accessing said networks;

a domain definition module for defining a domain configured by said one or more networks, said domain definition module storing an interface identifier for identifying an interface module in association with ~~and~~ a domain identifier for identifying said domain, wherein a set of one or more networks, each connected to interface modules identified by one or more interface identifiers corresponding to said domain identifier is ~~interface module~~ identified as said domain by said interface identifier;

an inter-domain communication definition module for defining connectability between said two or more domains defined by said domain definition module, said connectability based on a combination of the following parameters: a source/destination domain identifier, an inter-domain communicability field, and a translation rule;

a routing information storage module for storing domain routing information corresponding to each of said two or more domains defined by said domain definition module, said domain routing information including a destination network address to which a packet is sent, a next-hop gateway address to which said packet is relayed, an output interface identifier for identifying the interface module to which said packet is output, and said domain identifier

defined in said domain definition module for identifying the correspondence between said domain routing information and each of said two or more domains defined by said domain definition module; and

 a relay control unit for controlling relay of the communication data, said relay control unit controlling the relay of the communication data with reference to said domain routing information corresponding to the domain concerned in the case of a relay within said same domain, said relay control unit judging whether communication between the domains is permitted or not for the relay on the basis of said inter-domain communicability field which is held in said inter-domain communication definition module and defined for each combination of source domain identifier and destination domain identifier, in the case of a relay between the domains different from each other, so as to relay the communication data between the domains different from each other if communication is judged to be permitted wherein, when communication is judged to be permitted, the relay control unit translates address information included in the communication data on the basis of said translation rule which is held in said inter-domain communication definition module and defined for each combination of source domain identifier and destination identifier, registers, in an address translation table, mapping information indicating a mapping of said address information before being translated to said address information after being translated, and relays the communication data between the domains different from each other on the basis of said mapping information registered in said address translation table.

2. (original) A communication data relay system according to claim 1, further comprising a destination address search module for the relay destination domain, wherein if the relay

source domain does not have routing information to the relay destination domain, said destination address search module searches a destination address to the relay destination domain in response to a request from a source communication device within the relay source domain, and notifies said source communication device of a relay address within the relay source domain that corresponds to the destination address, and said relay control unit relays the communication data addressed to the relay address to the destination address in the relay destination domain.

3. (original) A communication data relay system according to claim 1, further comprising a routing control information storage module to the domain to which a communication data processing device for processing the communication data is connected, wherein said relay control unit, when controlling the relay of the communication data, causes said communication data processing device to process the communication data, and relays the thus processed communication data.